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| 10/601,060 | 06/23/2003 | Robert K. Thomson | | 5527 |

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EXAMINER

PHAM, LAM P

ART UNIT PAPER NUMBER

2636

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,060

Applicant(s)

THOMSON, ROBERT K.

Examiner

Lam P Pham

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 6-9, 13-23, 25 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-12, 24 and 26 is/are rejected.
- 7) ☒ Claim(s) 19, 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 19 (line 2) objected to because of the following informalities: "to configured" should be deleted. Appropriate correction is required.

Claim 26 objected to because of the following informalities: "the signal are amplified" should change to "the signal is amplified" to avoid grammatical error.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the sensor array" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-2, 4-5, 10-11 rejected under 35 U.S.C. 102(b) as being anticipated by Noel et al. (US 4781056).

Regards claim 1, Noel disclose a scale comprising:

a signal emission device (E) configured for emitting a signal;

a receiver device (R) configured for receiving the signal;

wherein the signal emission device and the receiver device are arranged to measure a deflection of a structural member (plate 20) as seen in Figures 1-5; col. 3, lines 6-68; col. 4, lines 1-68; col. 5, lines 1-68; col. 6, lines 1-27.

Regards claim 2, Noel disclose the signal emission device is an infrared light emitting diode (LED) (40) as seen in figure 4; col. 5, lines 11-24.

Regards claim 4, Noel disclose the deflection of the structural member is caused by an applied load (strain) as seen in Figure 5.

Regards claim 5, Noel disclose further comprising a tube (fiber), optics (light or fiber optics), and an amplifying device (411) arranged to measure the deflection of the structural member caused by an applied load as seen in Figures 1 and 4; col. 5, lines 25-50.

Regards claim 10, Noel disclose a scale comprising:

Optics (Receiver, photodiodes 40, and detecting device 41) including a sensor package (photodiodes 40); see Figures 1, 4 and 5; and

An emission device (Emitter) configured to communicate with the optics (Receiver 40 and detecting device 41) wherein the emission device is configured to

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transmit a signal through a tube (fiber optics); a tube is a cylindrical device within something can flow, in this case, it is light as seen in col. 5, lines 11-39.

Regards claim 11, Noel disclose the signal from the emission device further comprising a light beam travels through a length of the tube (fiber) to a face of the sensor package (photodiodes 40) located at an opposite end of the tube as seen in Figures 1a, 3 and 4; col. 3, lines 6-28; col. 5, lines 11-39.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3, 12, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Noel.

Regards claim 3, Noel disclose the signal emission device is an LED and fail to disclose the emission device is a laser. However, infrared, visible light and laser are well known for use in optical instruments, thus, it would have been obvious ton one of ordinary skilled in the art to have used a laser emission device in place of the infrared LED.

Regards claim 12, Noel fail to disclose the sensor package (photodiodes 40) includes a four-cell photoelectric array. However, since there are more than one photodiodes in a sensor package, it would have been obvious to one of ordinary skilled

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in the art to realize that the sensor package could be a two-cell or four-cell and others as a matter of design choices.

Regards claim 24, Noel fail to disclose the tube protects the optics from contamination, light, and environmental hazards. However, Noel disclose a housing (400) protecting the optics (photodiodes 40) and the tube from contamination, light and environmental hazards as seen in Figure 4; col. 5, lines 25-30. It would have been obvious to one of ordinary skilled in the art to realize that the housing and the tube are protecting the optics from contamination are equivalents.

7. Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Noel in view of Vaerewyck et. (US 4,613,811).

Regards claim 26, Noel fail to disclose the signal is amplified to produce a feedback signal for a temperature correction.

Vaerewyck et al. disclose a Faraday current sensor with fiber optic compensated by temperature, degradation, and linearity whereby a light signal is produced for temperature correction as seen in col. 3, lines 20-45. In view of Vaerewyck' s teaching, it would have been obvious to one of ordinary skilled in the art to have the light signal amplified to produce a feedback signal for a temperature correction.

Allowable Subject Matter

8. Claims 6-9, 13-23, 25, 27 allowed.

Conclusion

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kanning (US 4129191) discloses an optical detector for a weight system.

Allen (US 3556235) discloses a photocell checking circuit for optical scale.

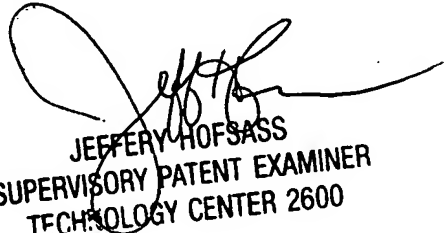
Wu (US 4044847) discloses a weighing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lam P Pham whose telephone number is 571-272-2977. The examiner can normally be reached on 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lam Pham
April 8, 2005.


JEFFERY HOFSSASS
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